

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A mobile terminal comprising:

VOX controller means for reducing a power feed to a part of a transmitter;

operation controller means for controlling operation of the VOX controller means in accordance with voice input from a user;

storage means for storing a plurality of thresholds for each of a plurality of usage conditions; and

usage condition detector means for determining in which one of the plurality of usage conditions the terminal is shifted in,

wherein the operation controller means is constructed to select one of the thresholds in correspondence with a detection result by the usage condition detector means and to operate the VOX controller means by comparing the voice input with the selected threshold.

2. (Previously Presented) The mobile terminal according to claim 1, wherein:

the usage condition detector means is constructed to detect a handset usage condition for processing the voice input from a handset microphone for a voice transmission, a hands-free microphone usage condition for processing the voice input from a hands-free microphone for the voice transmission, and an earphone usage

condition for processing the voice input from a headset microphone for the voice transmission.

3. (Original) The mobile terminal according to claim 2, wherein:

the usage condition detector means is constructed to automatically check whether the hands-free microphone and the headset microphone are in use thereby to determine in which usage condition of the handset usage, the hands-free microphone usage, and the headset microphone usage the mobile terminal is shifted.

4. (Original) The mobile terminal according to claim 3, wherein:

the usage condition detector means is constructed to check whether the hands-free microphone is connected and the handset is placed on a cradle thereby to determine the terminal is shifted in the hands-free microphone usage condition.

5. (Previously Presented) The mobile terminal according to claim 1, wherein:

the VOX controller means is constructed to compare at least one physical quantity of a plurality of physical quantities each having a different unit system as the physical quantity in relation to the voice transmission with a threshold;

the operation controller means is constructed to select at least one threshold having one unit to operate the VOX controller means in accordance with the selected at least one threshold, when the usage condition detector means determines one of the usage conditions; and

the operation controller means selects at least one of thresholds having another unit different from the one unit to operate the VOX controller means in accordance with at least the selected other threshold, when the usage condition detector means determines another usage condition different from the one of usage conditions.

6. (Original) The mobile terminal according to claim 5, wherein:

the VOX controller means is constructed to compare with a threshold at least one of a power of voice transmission and a frequency component of voice transmission used as the physical quantity in relation to the voice transmission;

the operation controller means is constructed to select a threshold in relation to the power of voice transmission and a threshold in relation to the frequency component of voice transmission and use the threshold selected for the power of voice transmission and the threshold selected for the frequency component of voice transmission to operate the VOX controller means, when the usage condition detector means determines either one of the handset usage condition or the headset microphone usage condition; and

the operation controller means is constructed to select a threshold in relation to the power of voice transmission and uses the threshold selected for the power of voice transmission to operate the VOX controller means, when the usage condition detector means determines the hands-free microphone usage condition.

7. (Previously Presented) The mobile terminal according to claim 1, wherein:

the storage means further stores a plurality of thresholds each different from one other, which has the same unit for the same usage condition.

8. (Previously Presented) A mobile terminal comprising:

VOX controller means for reducing a power feed to a part of a transmitter;

operation controller means for controlling operation of the VOX controller means in accordance with voice input from a user;

storage means for storing a plurality of thresholds corresponding to a plurality of usage conditions; and

usage condition detector means for determining in which one of the plurality of usage conditions the terminal is shifted in, wherein

the operation controller means is constructed to select one of the thresholds in correspondence with a detection result by the usage condition detector means and to operate the VOX controller means by comparing the voice input with the selected threshold;

the storage means further stores a plurality of bandwidth conditions corresponding to the plurality of usage conditions;

the operation controller means is constructed to select one bandwidth condition having one predetermined frequency bandwidth and use the one bandwidth condition thus selected to operate the VOX controller means, when the usage condition detector means determines one usage condition; and

the operation controller means is constructed to select one of other bandwidth conditions each having a predetermined frequency bandwidth different from

the one predetermined frequency bandwidth and use the bandwidth condition thus selected to operate the VOX controller means, when the usage condition detector means determines one of other usage conditions different from the one usage condition.

9. (Previously Presented) The mobile terminal according to claim 8, wherein:

the operation controller means is constructed to select one bandwidth condition having one predetermined frequency bandwidth and use the one bandwidth condition thus selected to operate the VOX controller means, when the usage condition detector means determines the handset usage condition or the headset microphone usage condition; and

the operation controller means is constructed to select one of other bandwidth conditions each having a predetermined frequency bandwidth different from the one predetermined frequency bandwidth and use the one of the other bandwidth conditions thus selected to operate the VOX controller means, when the usage condition detector means determines the hands-free microphone usage condition.

10. (Original) The mobile terminal according to claim 1, wherein:

the operation controller means is constructed to select a threshold corresponding to a predetermined manual entry of operating keypad means from a plurality of thresholds stored in the storage means and use thus selected threshold to operate the VOX controller means.

11. (Previously Presented) A method of controlling a mobile terminal having a handset microphone and connectable to an external microphone, the method comprising the steps of:

detecting which one of the microphones is in use;

setting a threshold variably depending on a result of the detecting step, the threshold being for use in controlling a power used in the mobile terminal for input voice transmitting operation;

detecting a parameter related to an input voice;

comparing the detected parameter with the threshold to detect an insubstantial voice input period; and

reducing the power used for the input voice transmitting operation during the insubstantial voice input period.

12. (Original) The method as in claim 11, wherein:

the parameter includes at least one of the input voice power, a voice power differential, a band power and a frequency component.

13. (Previously Presented) A mobile terminal comprising:

VOX controller means for reducing a power feed to a part of a transmitter;

operation controller means for controlling operation of the VOX controller means;

storage means for storing a plurality of thresholds for each of a plurality of usage conditions; and

usage condition detector means for determining in which one of the plurality of usage conditions the terminal is shifted in; wherein

the operation controller means is constructed to select one of the thresholds in correspondence with a detection result by the usage condition detector means and to operate the VOX controller means in accordance with the selected threshold; and

the usage condition detector means is constructed to detect a handset usage condition for processing voice input from a handset microphone for a voice transmission, a hands-free microphone usage condition for processing voice input from a hands-free microphone for the voice transmission, and an earphone usage condition for processing voice input from a headset microphone for the voice transmission.

14. (Previously Presented) The mobile terminal according to claim 13, wherein:

the usage condition detector means is constructed to automatically check whether the hands-free microphone and the headset microphone are in use thereby to determine in which usage condition of the handset usage, the hands-free microphone usage, and the headset microphone usage the mobile terminal is shifted.

15. (Previously Presented) The mobile terminal according to claim 14, wherein:

the usage condition detector means is constructed to check whether the hands-free microphone is connected and the handset is placed on a cradle thereby to determine the terminal is shifted in the hands-free microphone usage condition.

16. (Previously Presented) A mobile terminal comprising:

VOX controller means for reducing a power feed to a part of a transmitter;

operation controller means for controlling operation of the VOX controller means;

storage means for storing a plurality of thresholds for each of a plurality of usage conditions; and

usage condition detector means for determining in which one of the plurality of usage conditions the terminal is shifted in; wherein

the operation controller means is constructed to select one of the thresholds in correspondence with a detection result by the usage condition detector means and to operate the VOX controller means in accordance with the selected threshold;

the VOX controller means is constructed to compare at least one physical quantity of a plurality of physical quantities each having a different unit system as the physical quantity in relation to the voice input with a threshold;

the operation controller means is constructed to select at least one threshold having one unit to operate the VOX controller means in accordance with the selected at least one threshold, when the usage condition detector means determines one of the usage conditions; and

the operation controller means selects at least one of thresholds having another unit different from the one unit to operate the VOX controller means in accordance with at least the selected other threshold, when the usage condition detector means determines another usage condition different from the one of usage conditions.

17. (Previously Presented) A mobile terminal comprising:

VOX controller means for reducing a power feed to a part of a transmitter;

operation controller means for controlling operation of the VOX controller means;

storage means for storing a plurality of thresholds corresponding to a plurality of usage conditions; and

usage condition detector means for determining in which one of the plurality of usage conditions the terminal is shifted in; wherein

the operation controller means is constructed to select one of the thresholds in correspondence with a detection result by the usage condition detector means and to operate the VOX controller means in accordance with the selected threshold;

the VOX controller means is constructed to compare at least one physical quantity of a plurality of physical quantities each having a different unit system as the physical quantity in relation to the voice transmission with a threshold;

the operation controller means is constructed to select at least one threshold having one unit to operate the VOX controller means in accordance with the

selected at least one threshold, when the usage condition detector means determines one of the usage conditions; and

the operation controller means selects at least one of thresholds having another unit different from the one unit to operate the VOX controller means in accordance with at least the selected other threshold, when the usage condition detector means determines another usage condition different from the one of usage conditions; wherein

the VOX controller means is constructed to compare with a threshold at least one of a power of voice transmission and a frequency component of voice transmission used as the physical quantity in relation to the voice transmission;

the operation controller means is constructed to select a threshold in relation to the power of voice transmission and a threshold in relation to the frequency component of voice transmission and use the threshold selected for the power of voice transmission and the threshold selected for the frequency component of voice transmission to operate the VOX controller means, when the usage condition detector means determines either one of the handset usage condition or the headset microphone usage condition; and

the operation controller means is constructed to select a threshold in relation to the power of voice transmission and uses the threshold selected for the power of voice transmission to operate the VOX controller means, when the usage condition detector means determines the hands-free microphone usage condition.

18. (Previously Presented) A mobile terminal comprising:

VOX controller means for reducing a power feed to a part of a transmitter;
operation controller means for controlling operation of the VOX controller
means;

storage means for storing a plurality of thresholds corresponding to a
plurality of usage conditions; and

usage condition detector means for determining in which one of the
plurality of usage conditions the terminal is shifted in; wherein

the operation controller means is constructed to select one of the
thresholds in correspondence with a detection result by the usage condition detector
means and to operate the VOX controller means in accordance with the selected
threshold;

the storage means further stores a plurality of bandwidth conditions
corresponding to the plurality of usage conditions;

the operation controller means is constructed to select one bandwidth
condition having one predetermined frequency bandwidth and use the one bandwidth
condition thus selected to operate the VOX controller means, when the usage condition
detector means determines one usage condition; and

the operation controller means is constructed to select one of other
bandwidth conditions each having a predetermined frequency bandwidth different from
the one predetermined frequency bandwidth and use the bandwidth condition thus
selected to operate the VOX controller means, when the usage condition detector
means determines one of other usage conditions different from the one usage condition.

19. (Previously Presented) The mobile terminal according to claim 18, wherein:

the operation controller means is constructed to select one bandwidth condition having one predetermined frequency bandwidth and use the one bandwidth condition thus selected to operate the VOX controller means, when the usage condition detector means determines the handset usage condition or the headset microphone usage condition; and

the operation controller means is constructed to select one of other bandwidth conditions each having a predetermined frequency bandwidth different from the one predetermined frequency bandwidth and use the one of the other bandwidth conditions thus selected to operate the VOX controller means, when the usage condition detector means determines the hands-free microphone usage condition.

20. (Previously Presented) The method as in Claim 11 further comprising:

storing a plurality of thresholds for each microphone and wherein the step of setting a threshold includes selecting one of the plurality of thresholds of the detected microphone.